###### http://www.stevespanglerscience.com/media/ee/40cd55e8063284fe7650e5fcc8b02c3da9b66c1f.jpg**Materials**

* Mason jar (pint size) with twist-on lid
* Circular plastic screen insert
* Scissors
* Index cards
* Tub or sink to practice over

***EXPERIMENT***

1. Place the plastic screen material over the opening of the jar and screw on the lid (sealing band). Remove the lid and use scissors to cut around the indentation. What you're left with is a screen insert that fits perfectly into the top of the sealing band.
2. Place the screen over the opening of the jar and twist on the lid. Make sure that you do not accidentally show your audience the secret screen.
3. When you're ready to perform the trick, fill the jar with water by simply pouring water through the screen. Cover the opening with the index card. Hold the card in place as you turn the card and the jar upside down. Gently let go of the card. The water doesn't spill!
4. Carefully remove the card from the opening and the water mysteriously stays in the jar! Replace the card, turn the whole thing over, remove the card and pour out the water. That's amazing!

***HOW DOES IT WORK?***

The water is mysteriously suspended in the jar because of air pressure and surface tension.

Air Pressure: The atmosphere exerts about 15 pounds of pressure per square inch of surface at sea level. Because it's a gas, air not only pushes down, but also upwards and sideways. The card remains in place because the pressure of the air molecules pushing up on the card is greater than the weight of the water pushing down. But how does the water stay in the jar when the card is removed? The answer is *surface tension.*  
  
Surface Tension: The surface of a liquid behaves as if it has a thin membrane stretched over it. A force called *cohesion*, which is the attraction of similar molecules to each other, causes this effect. The surface tension "membrane" is always trying to contract, which explains why falling droplets of water are spherical or ball shaped. The water stays in the jar even though the card is removed because the molecules of water are joined together (through cohesion) to form a thin membrane between each opening in the screen. Be careful not to jiggle the jar or touch the screen because you'll break the surface tension and surprise everyone with a gush of water!